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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/696,178	10/26/2000	Koichi Furusawa	P19724	4348

7055 7590 06/03/2003

GREENBLUM & BERNSTEIN, P.L.C.  
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RESTON, VA 20191

EXAMINER

QADERI, RUNA S

ART UNIT	PAPER NUMBER
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3737

DATE MAILED: 06/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/696,178

Applicant(s)

FURUSAWA ET AL.

Examiner

Runa S. Qaderi

Art Unit

3737

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 March 2003.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 and 3-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \*   c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, and 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boppart et al.

Boppart et al. teaches an endoscope system comprising a light guide having a plurality of optical paths (figure 1), a low coherent light source (10), an interferometer unit including a beam splitter (14) a reference optical system (19), a reflector unit (19), a light detecting device (34), and a signal processing system (38,42), column 2 lines 30-49 and column 5 lines 3-25. The patent also teaches a driving means, figures 4a-l, columns 11-14. Further the Boppart et al. reference teaches utilizing multiple imaging technologies sequentially, in parallel, or simultaneously over the same endoscope such as OCT and fluorescence imaging, column 8 lines 50-67. Boppart et al. teaches translating or moving the optically components of the endoscope system in parallel to the longitudinal axis of the probe, perpendicular to the longitudinal axis of the probe, or both to provide for a more thorough imaging of the specimen, column 5 lines 25-46, column 9, column 11, column 12 lines 59-60, column 15 and 16, etc. The entirety of the patent teaches various mechanical embodiments (driving unit) of the imaging probe to provide for scanning of the x and y axis of the tissue, or surface and depth, respectively. Although the patent does not explicitly recite the language "driving unit that moves

Art Unit: 3737

interferometer unit" it would have been obvious to a person of ordinary skill in the art at the time the invention was made that to interpret the lens, fibers, mirrors, etc. that are moved by the driving unit of Boppart et al. are components of the interferometer unit as taught by the applicant. The patent is very clear and sufficient in teaching that during the OCT imaging of the tissue a driving unit moves or translate various components of the OCT imaging system to provide for "depth ranging information of tissue", column 21 lines 28. Not only does the driving unit of Boppart et al. provide for movement of optical imaging components toward and away from tissue but it also allows movement of the components along the surface of the tissue, thereby providing for 3 dimensional imaging of the tissue. The Boppart et al. patent does not explicitly recite the limitations as claimed in claims 3 and 4. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have alternatively provided the limitations as taught by applicant claims 3 and 4 because the endoscope system as taught by Boppart et al. performs equally well.

### ***Response to Arguments***

Applicant's arguments filed 3/17/03 have been fully considered but they are not persuasive.

Applicants arguments that the Boppart et al. reference does not teach a driving unit that moves the interferometer toward and away from the tissue. Applicant agrees that the Boppart et al. reference teaches a driving unit that moves a fiber/lens unit. In response, the fiber(s), lens, mirrors, etc. of Boppart et al. that are moved by the driving

Art Unit: 3737

unit are components of the applicants' interferometer unit. Therefore movement of these components is movement of the interferometer unit. Further the Boppart et al. reference clearly teaches that these various mechanical embodiments to allow for this movement are provided so that the tissue can be scanned both in depth and surface. The entirety of the patent focuses on provided different mechanical embodiments of the endoscope system to allow for movement or translations of the optical components in the x and y axis of the probe by a driving unit. The driving unit of Boppart et al. reference goes further than the driving unit of the applicant because in addition to movement away and toward the tissue, the components are also moved transverse to the longitudinal axis of the probe or even at an angle to the longitudinal axis of the probe.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

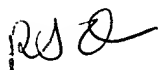
Art Unit: 3737

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Runa S. Qaderi whose telephone number is (703) 308-8155. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marvin Lateef can be reached on (703) 308-3256. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3590 for regular communications and (703) 746-7289 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.



RSQ  
May 23, 2003



Marvin M. Lateef  
Supervisory Patent Examiner  
Group 3700